WAD 2917
RE ← # 86
5/24/94

ENFORCEMENT SENSITIVE

DRAFT

MAY 24, 1994

TO: MR. DAVID CROXTON
HW-106

FROM: ROBERT FARRELL

SUBJECT: FEBRUARY, 1994 CHEMICAL MONITORING

The February, 1994 water chemistry data has been reviewed to see if the distribution of contaminates are consistent with previous sampling and to determine if there are any changes in the distribution of chemicals.

DEEPER AQUIFER

There are seven deeper monitoring wells. TPH(diesel) was detected in 103B, 104B, 105B(not in the deeper aquifer material), 108B, and 122B. 1,1-DCA was detected in 104B and carbon disulfate was detected in 122B. These chemicals are also found in the shallower aquifer. Wells 106B and 115B had ND for all parameters tested. In the last sampling rounds TCE was detected at 104B, 105B, and 122B. TPH(diesel), 1,1-DCA, and carbon disulfate appear to be new chemicals in the deeper ground water wells. TPH(diesel) could reach the deeper wells only as a dissolved phase or as a sampling contaminate.

SHALLOW AQUIFER

Wells 107, 104A, 103A, 109, 116, 117, 118, 119, 39-3, and W-10 are highly contaminated in the February, 1994 sampling. These wells were also highly impacted with multiple contaminates in earlier sampling rounds. There appears to have been a decrease in the number of contaminates detected in 110, 103A, 108A, 111, 112, 113, and 114. TCE was not detected in 103A, 108A, 113, and 114 as it was in earlier sampling rounds. Chloroethane was not detected in 111, and 112 as it was is earlier sampling rounds. 4-methyl phenol(103A), fluorene(108A), dibenzofuren(108A), methyl chloride(111), and vinyl chloride(113) were not detected in shallow monitoring wells in the February, 1994 sampling round as they had been in earlier sampling rounds. No data is presented in this report on the presence of LNAPL in any wells.

The plumes for each of the major contaminates detected in February, 1994 have been placed on individual maps so that the distribution of the contamination can be visualized.

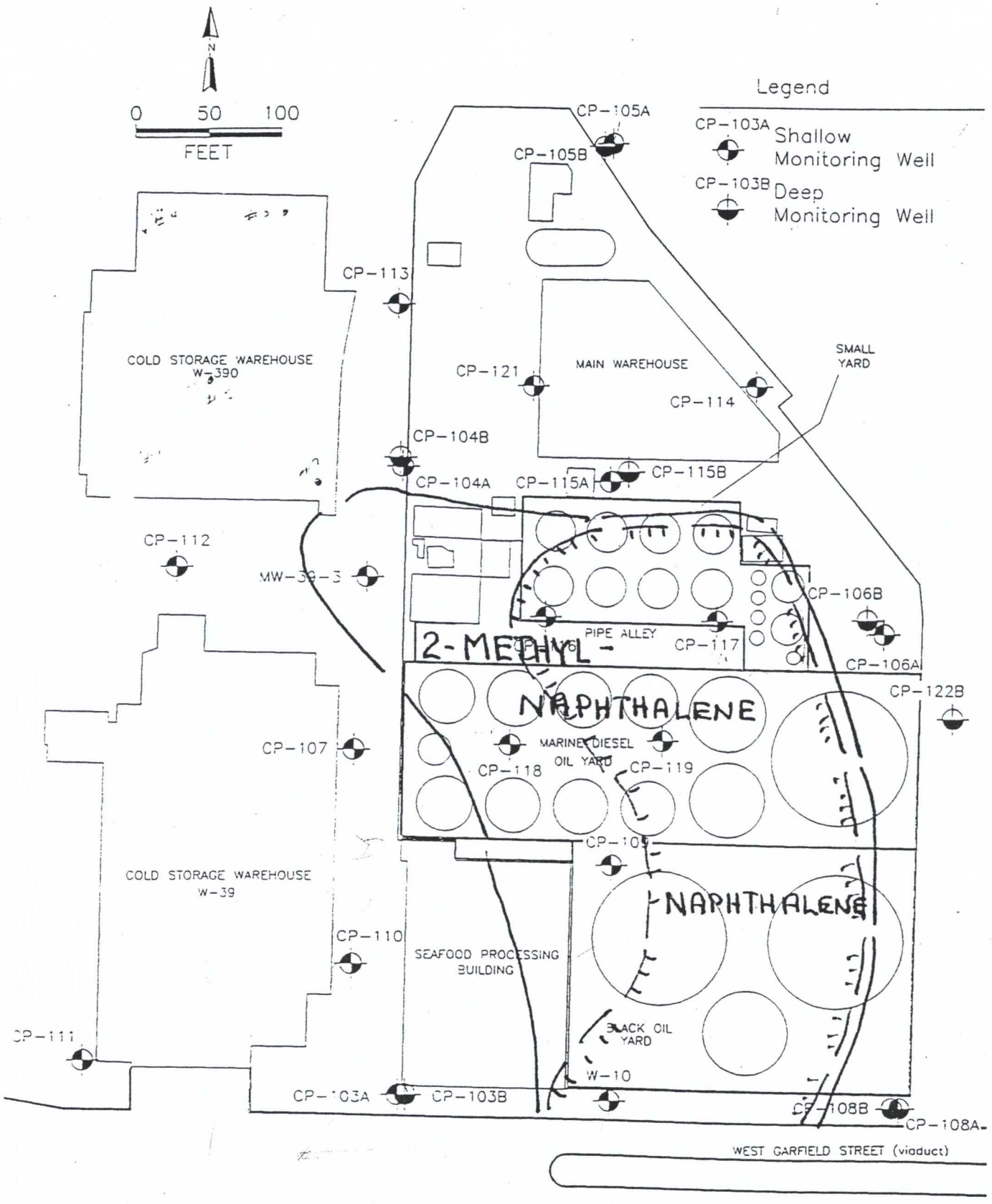
Chloroethane, 1,1-DCA, naphthalene, 2-methyl naphthalene, MEK, acetone, carbon disulfate, benzene, and toluene form well defined plumes related to site. Chloroethane, 1,1-DCA, naphthalene, 2-methyl naphthalene, benzene, and toluene extend off site and beyond the existing monitoring well network. The limits of these plumes have not been defined.

Ethylbenzene forms a distinct plume in a north/south line of wells 39-3, 107, and 110. Ethylbenzene is also detected at 119 and W-10. It is not clear if these are isolated occurrences or if they are part of a larger plume. There are not enough wells make this determination.

TPH(gasoline) forms a distinct plume under wells 116, 117, 118, and 119. It is separated from another plume of TPH(gasoline) at wells 103A and W-10 by non-detects of TPH(gasoline) at 110 and 109. It is not clear if these two plumes represent different plumes or different releases from the Burlington facility. Alternatively, they could be the same plume that has somehow snaked its way around 110 and 109 without being detected.

Vinyl chloride is detected in three isolated wells, 104A, 107, and 117. Vinyl chloride does not form a plume. It is not clear why vinyl chloride is detected where it is. It is likely a breakdown product of one of the VOCs but why it occurs where it occurs is not known.

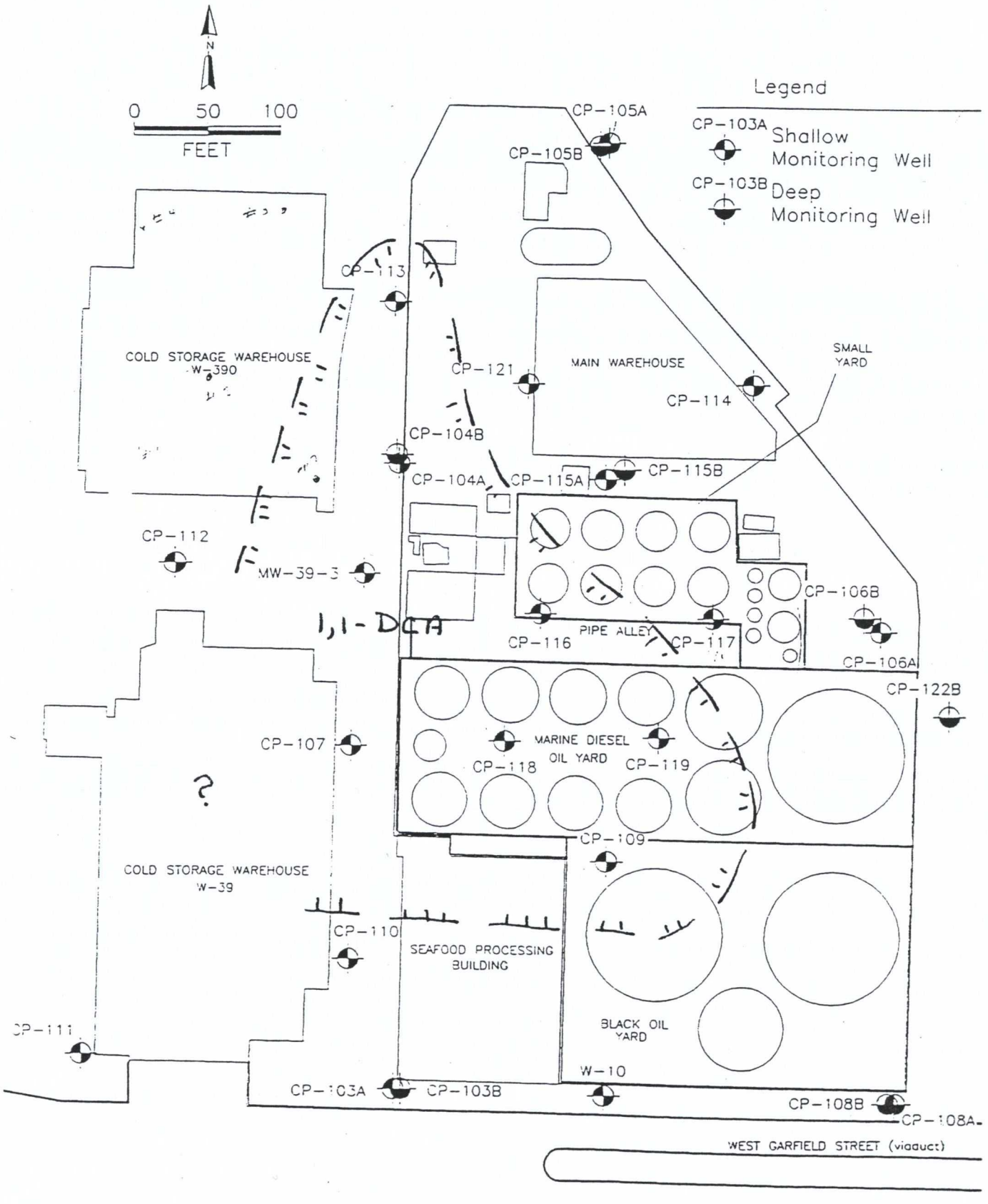
Two plumes of TPH(diesel) are present. One extends around the northern end of the site and extends on site to wells 114, 117, and 118. The second plume is south of the site in wells 111, 103A, and 108A. The highest concentration occurs onsite at well 118. It seems likely that the TPH(diesel) at wells 117 and 118 are from releases on site. The TPH(diesel) at 112, 113, 104A, and 114 likely represent offsite sources moving onsite from the north and northeast with the shallow ground water flow. The TPH(diesel) south of the site could be a plume that has already passed the site or it could be a separate release in this area. There are known releases of diesel fuel several hundred feet further to the southeast at PNOCO fuel lines. There is not enough information on this plume to allow the source of this plume to be determined.



Note: All locations shown are approximate.

FEBRUARY, 1994

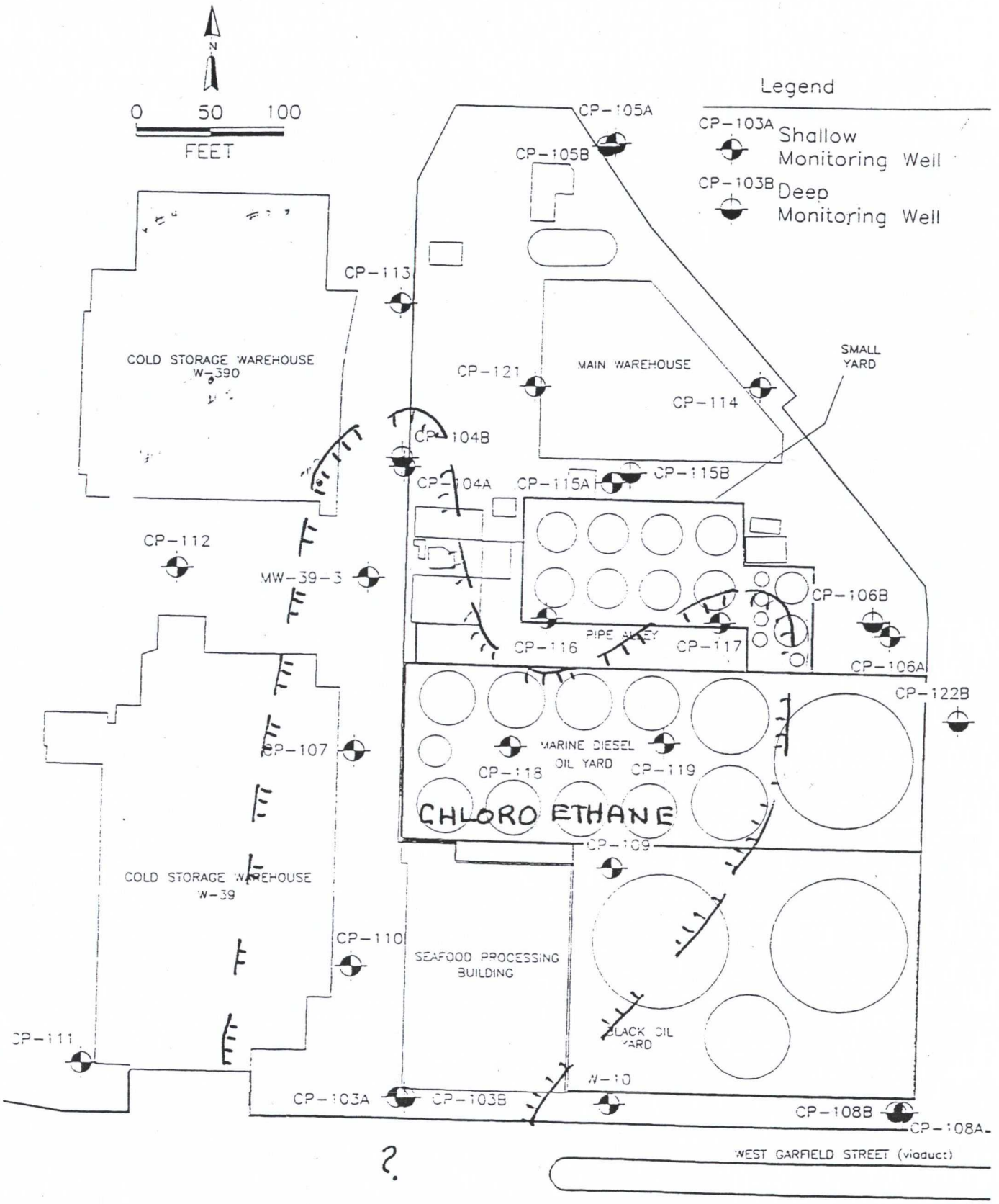
BURLINGTON ENVIRONMENTAL	TITLE: Monitoring Well Locations Burlington Pier 91 Facility	DWN: drd / DES.:	PROJECT NO.: 624878	
		CHKD: MA / APPD: JAM		
		DATE: 9/30/93 / REV.: 3	FIGURE NO.: 3-1	



Note: All locations shown are approximate.

FEBRUARY, 1994

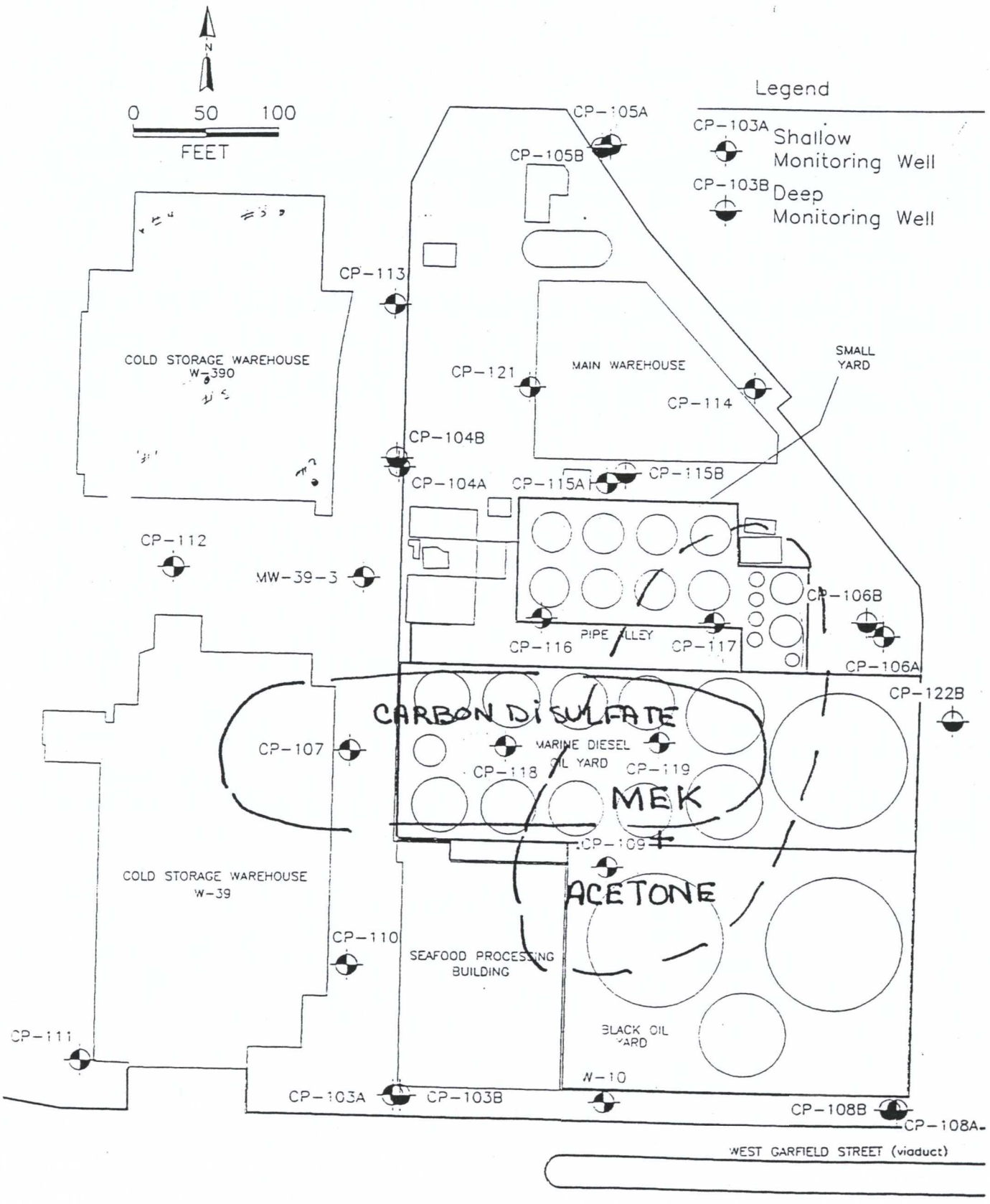
BURLINGTON ENVIRONMENTAL	TITLE: Monitoring Well Locations Burlington Pier 91 Facility	DWN: drp	DES.:	PROJECT NO.: 624878
		CHKD: MA	APPD: JAM	
		DATE: 9/30/93	REV.: 3	FIGURE NO.: 3-1



Note: All locations shown are approximate.

FEBRUARY, 1994

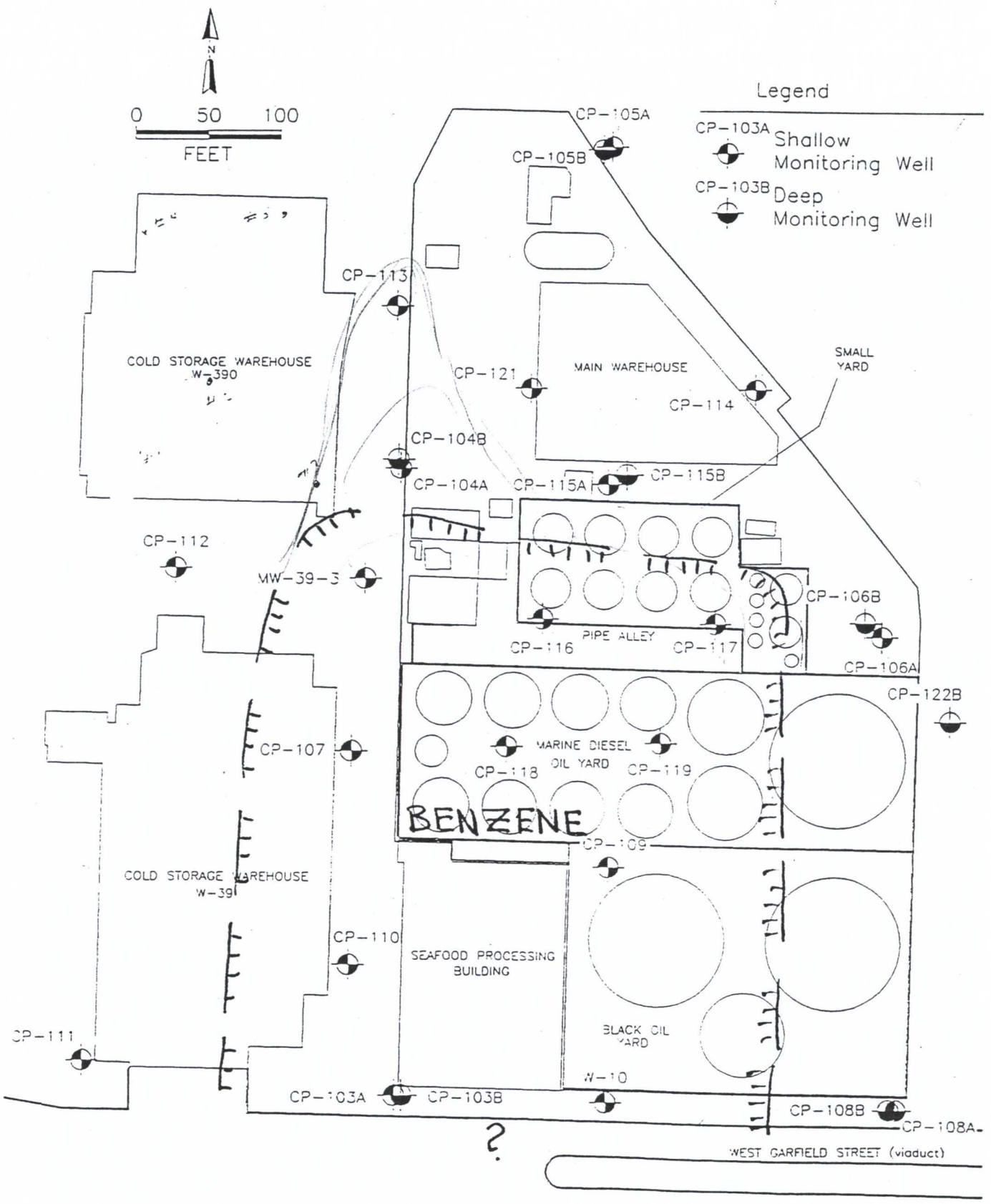
BURLINGTON ENVIRONMENTAL	TITLE: Monitoring Well Locations Burlington Pier 91 Facility	DWN: CPD / DES.:	PROJECT NO.: 624878	
		CHKD.: MA / APPD.: JAM		
		DATE: 9/30/93 / REV.: 3	FIGURE NO.: 3-1	



Note: All locations shown are approximate.

FEBRUARY, 1994

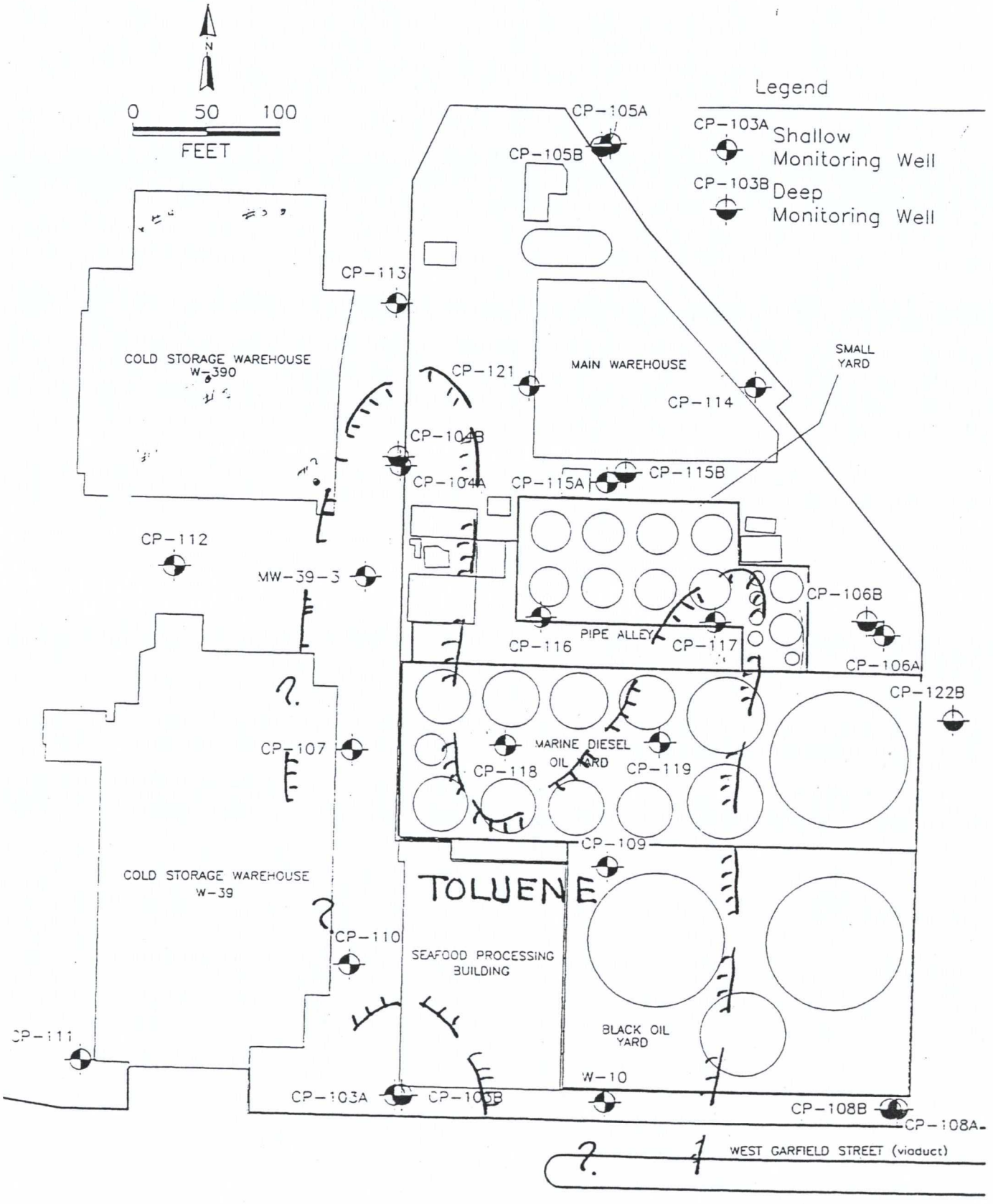
BURLINGTON ENVIRONMENTAL	TITLE: Monitoring Well Locations Burlington Pier 91 Facility	DWN: drd / DES.:	PROJECT NO.: 624878
		CHKD.: MA / APPD.: JAM	
		DATE: 9/30/93 / REV.: 3	FIGURE NO.: 3-1



Note: All locations shown are approximate.

FEBRUARY, 1994

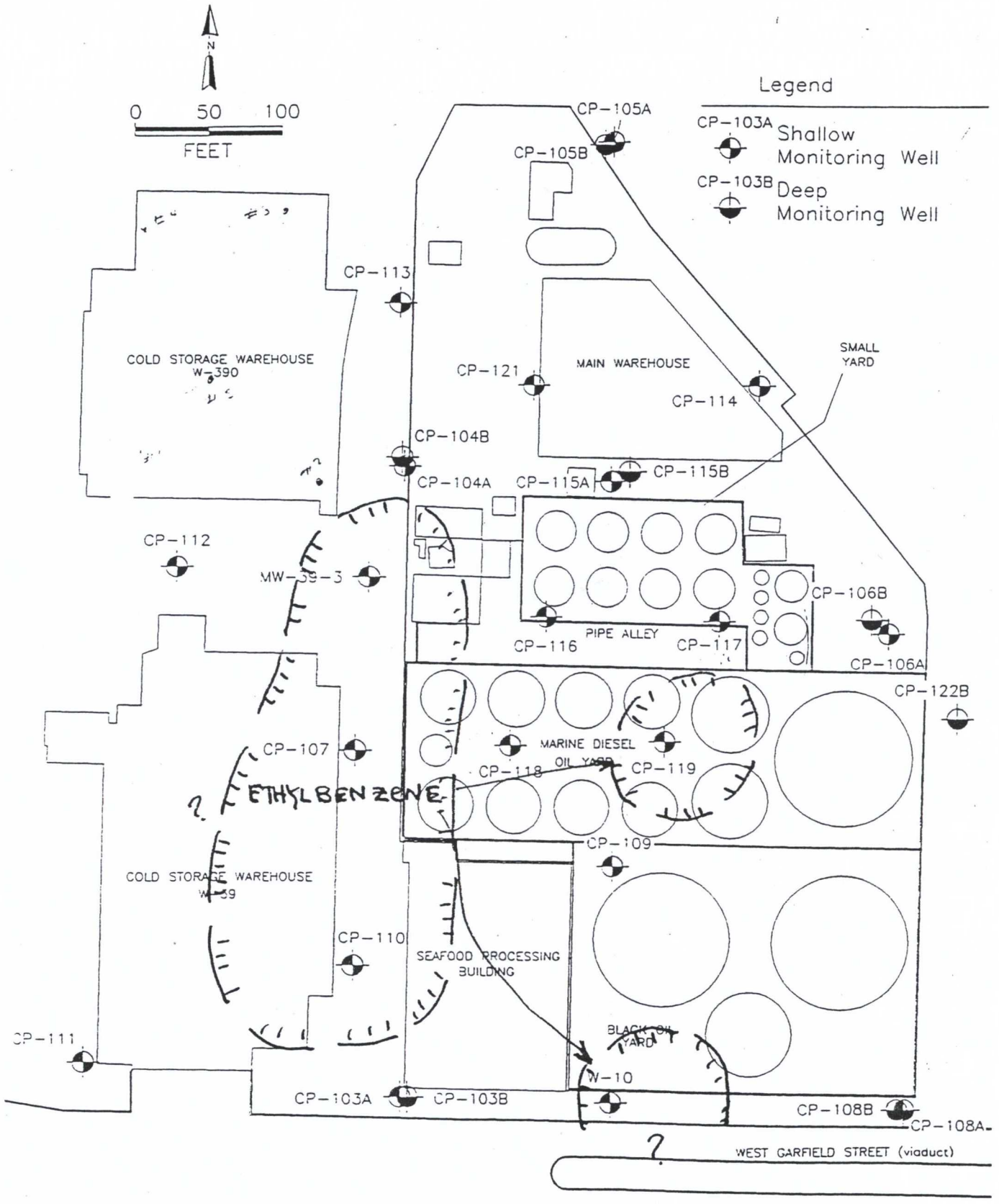
BURLINGTON ENVIRONMENTAL	TITLE: Monitoring Well Locations Burlington Pier 91 Facility	DWN: JRD / DES.:		PROJECT NO.: 624878
		CHKD.: MA	APPD.: JAM	FIGURE NO.: 3-1
		DATE: 9/30/93	REV.: 3	



Note: All locations shown are approximate.

FEBRUARY, 1994

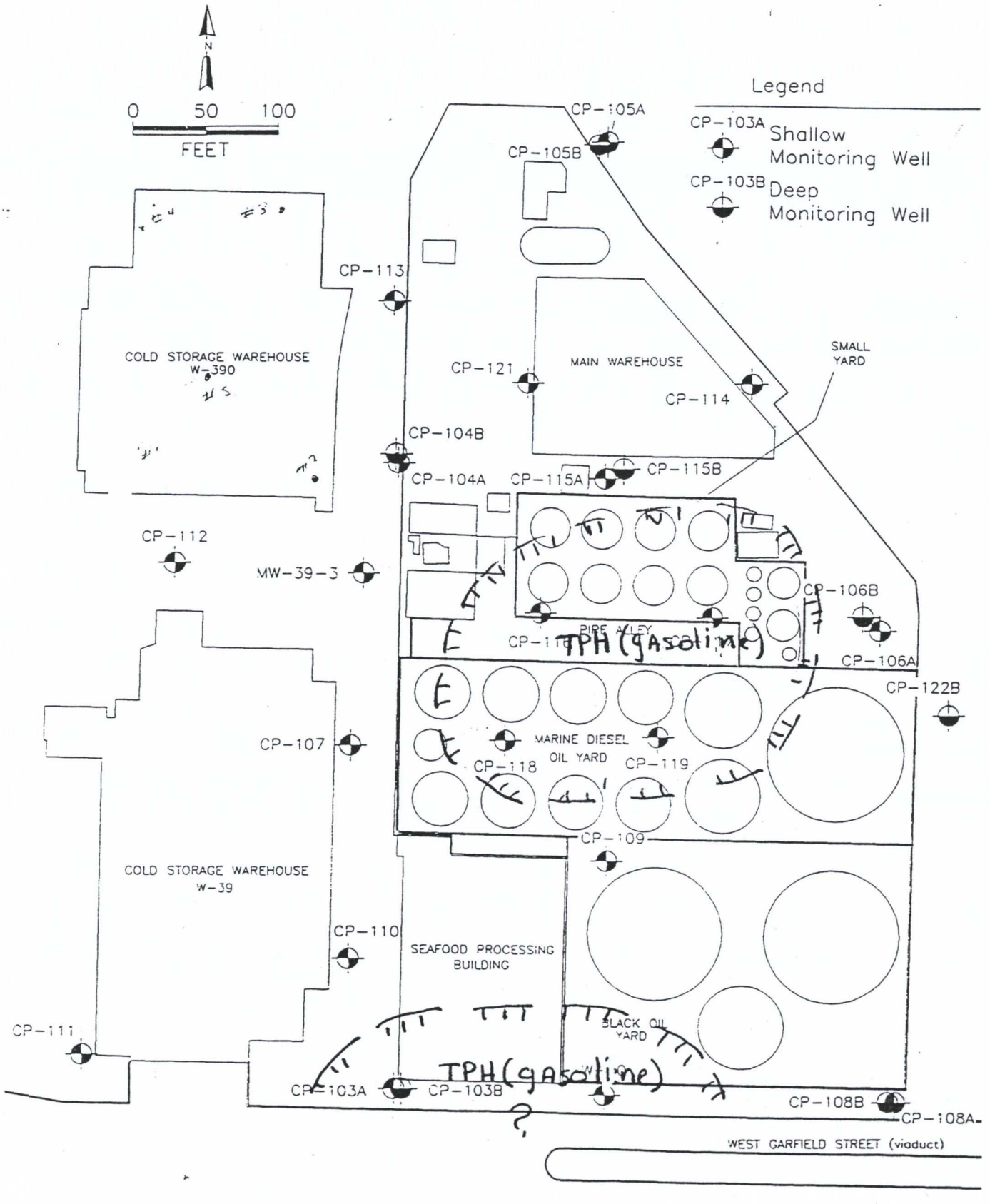
BURLINGTON ENVIRONMENTAL	TITLE: Monitoring Well Locations Burlington Pier 91 Facility	DWN: drp / DES.:	PROJECT NO.: 624878	
		CHKD: MA / APPD: JAM		
		DATE: 9/30/93 / REV.: 3	FIGURE NO.: 3-1	



Note: All locations shown are approximate.

FEBRUARY, 1994

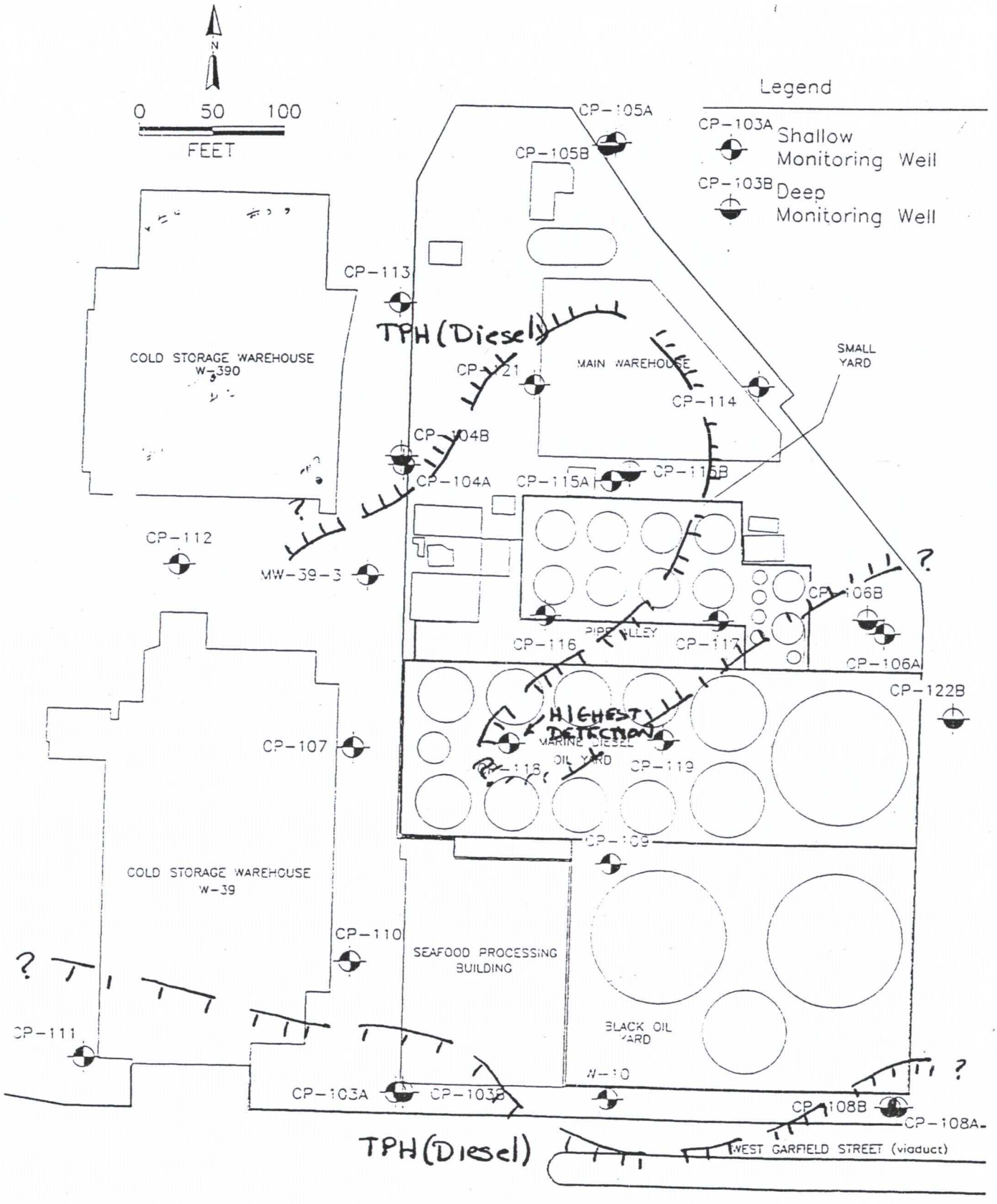
BURLINGTON ENVIRONMENTAL	TITLE: Monitoring Well Locations Burlington Pier 91 Facility	DWN: drp / DES.:	PROJECT NO.: 624878
		CHKD: MA / APPD: JAM	FIGURE NO.: 3-1
		DATE: 9/30/93 / REV.: 3	



Note: All locations shown are approximate.

FEBRUARY, 1994

BURLINGTON ENVIRONMENTAL	TITLE: Monitoring Well Locations Burlington Pier 91 Facility	DWN: drp / DES.:	PROJECT NO.: 624878	
		CHKD.: MA / APPD.: JAW		
		DATE: 9/30/93 / REV.: 3	FIGURE NO.: 3-1	



Note: All locations shown are approximate.

FEBRUARY, 1994

BURLINGTON ENVIRONMENTAL

TITLE:
Monitoring Well Locations
Burlington Pier 91 Facility

DWN:	DES.:	PROJECT NO.:
CTD		624878
CHKD.:	APPD.:	FIGURE NO.:
MA	JAW	3-1
DATE: 9/30/93	REV.: 3	